blueprism®

SECTION 4
ACTIVITY SHEET

FOUNDATION TRAINING GUIDE

Suitable for Blue Prism version 6.2 or greater

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Section 4 Activity Sheet

In Section 4, you will build upon your understanding of Layers of Logic, by exploring how Input and Output Parameters can transmit values across the different Pages within a Process, between separate Processes and into Processes from external sources.

You will also expand upon your knowledge of Data Items, to broaden the capabilities they can offer and to enhance accessibility to stored values, so they can be used universally by all aspects of a Blue Prism Solution.

By the end of this section, you will begin to widen your focus out from Process Studio, to cover more aspects of Blue Prism Solutions. In this activity, an Input Parameter will determine how many times the Process will flow around the loop.

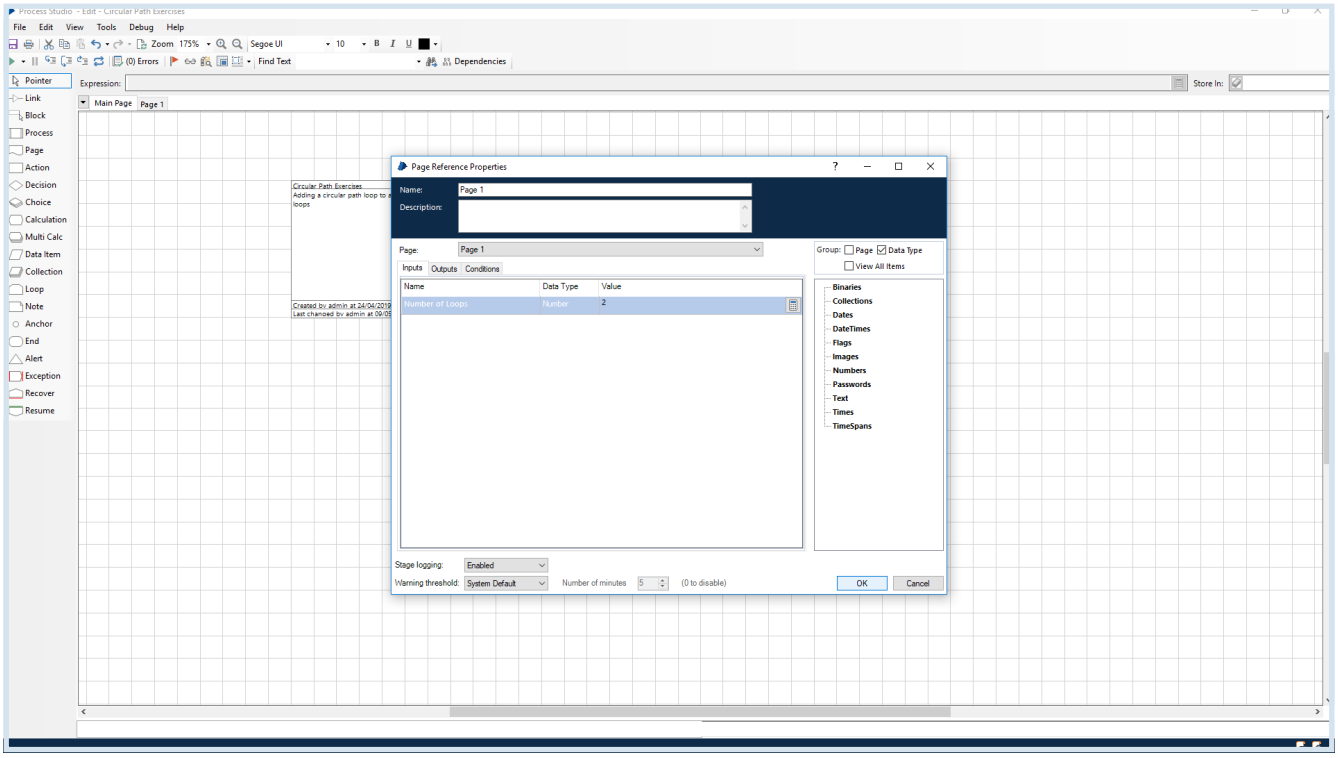
SECTION 4 ACTIVITY 1a — Video 4.1

You'll set up an Input Parameter and establish a relationship between the Page Reference Stage on the Main Page and the Start Stage on *Page 1*. Input Parameters will then be used to transmit values from the upper Page down to the Start Stage of the lower Page.

You'll also set up a Startup Parameter, that can request an external value from the user, before the Process begins.

Set up an Input Parameter.

- For this activity, you'll be using the ***Circular Path Exercises*** Process.
- Open the Start Stage properties window on ***Page 1***.
- Add a new Input Parameter and name it ***Number of Loops***.
- Drag the ***Loop Limit*** Data Item from the Data Items section, to the ***Store In*** column. This will automatically set the Data Type of the Input Parameter to ***Number***.
- Navigate to the Main Page and open the Page Reference Stage properties.
- In practice, you would normally create an Expression to determine the value of the Input Parameter. But for the purposes of this training activity, you will just enter a singular value into the Page Reference Stage properties.
- Input a singular value of *2* into the Value field in the Page Reference Stage properties. This will set the number stored within the ***Loop Limit*** Data Item, to this value.

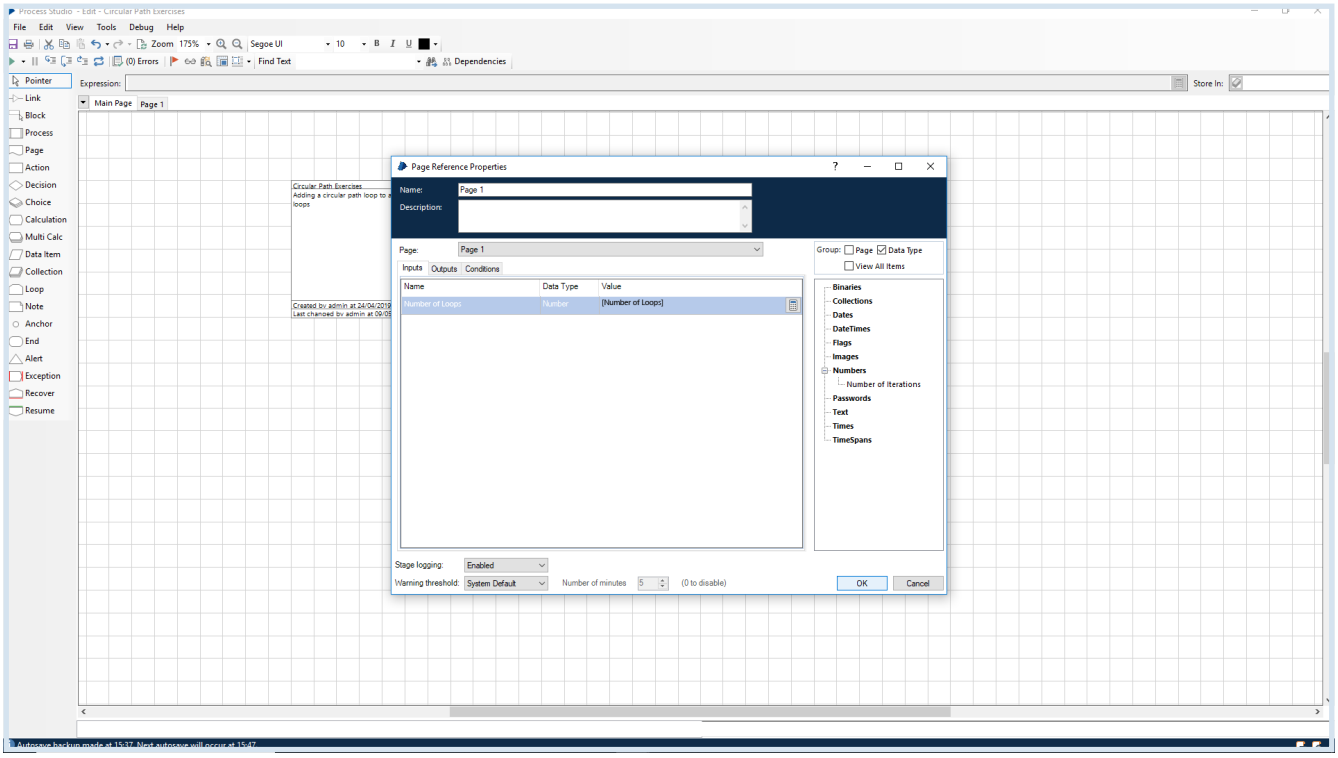


SECTION 4 ACTIVITY 1b

Video 4.1

Configure the Process so that a value within a Data Item is used as the Input Value.

- On the Main Page add a new Data Item, name it *Number of Loops* and apply a *Number* Data Type. Set the Initial Value to *4*.
- Open the Page Reference Stage properties and *delete* the number in the Value column.
- *Drag* the *Number of Loops* Data Item into the Value column.
- Click *Reset* then *Go*.

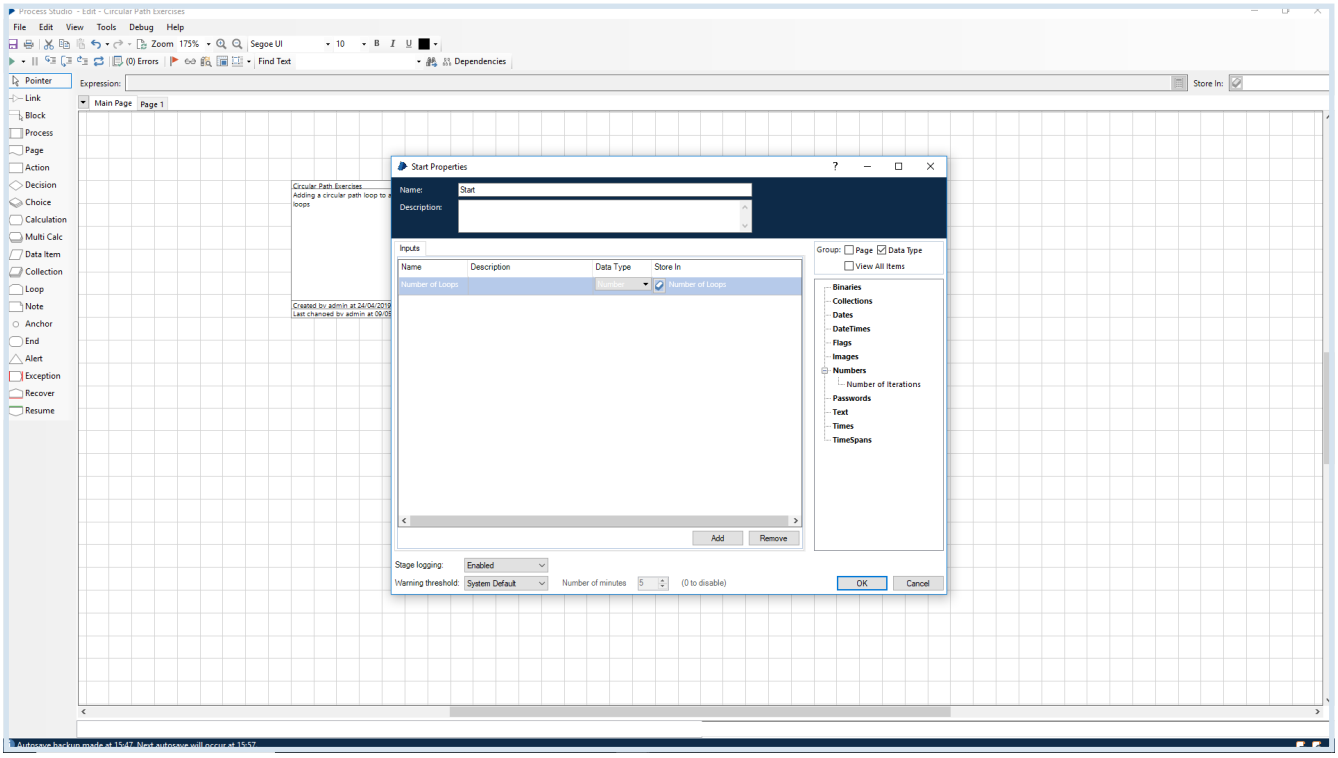


SECTION 4 ACTIVITY 1c

Video 4.1

Modify the Process by setting up a Startup Parameter, that will transmit an external value to determine the *Loop Limit*.

- On the Main Page, add an Input to the Start Stage named *Number of Loops*.
- Use the existing *Number of Loops* Data Item in the *Store In* column.
- *Delete* the value in the *Number of Loops* Data Item on the Main Page, as this value will now be input by the user via Control Room.
- Save and close the Process.
- The Startup Parameter you have just configured will be used in a later activity.

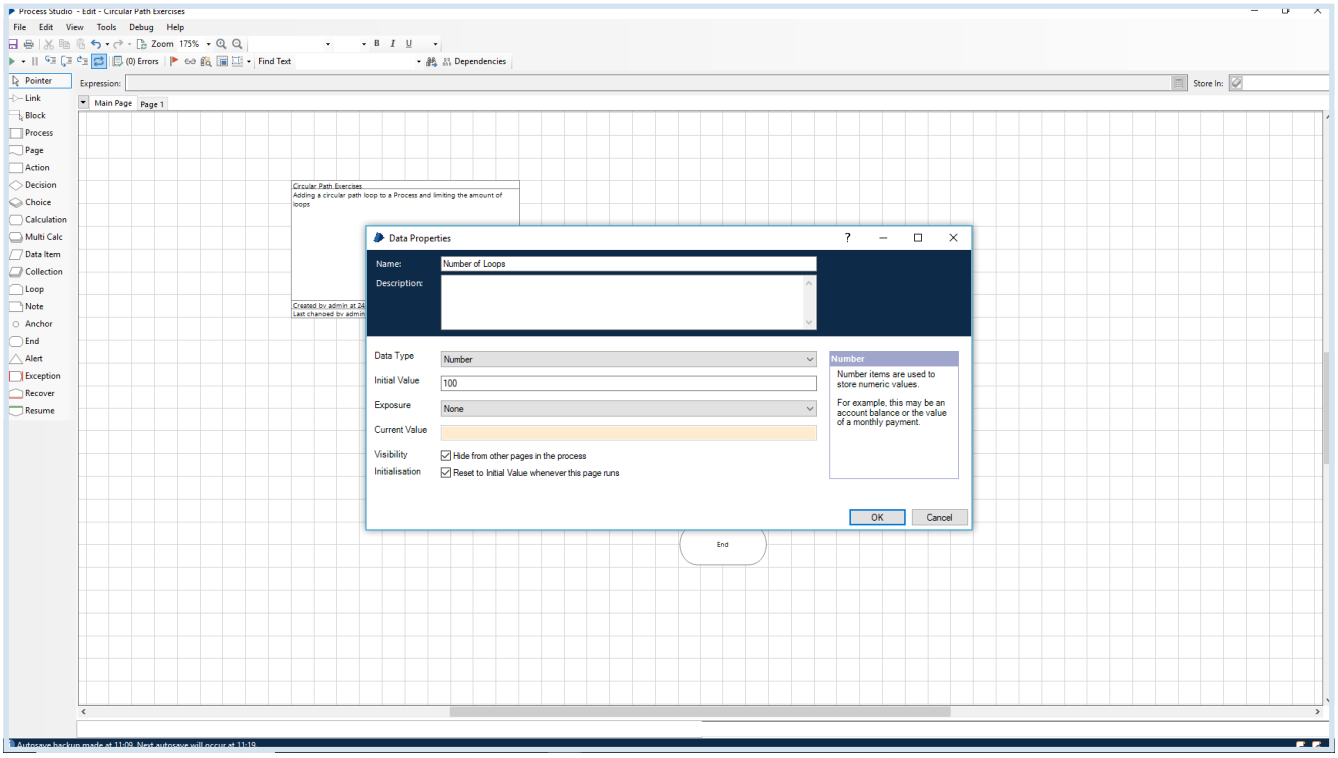


SECTION 4 ACTIVITY 2 — Video 4.2

In this activity, you'll use the Step Over button to step past a Page Reference Stage, rather than stepping down into the Sub-Page and through every Stage on that Page. You'll also use the Step Out button, to execute the rest of the Stages on a Page in one go.

Use the Step Over and Step Out buttons to navigate through a Process in different ways.

- For this activity, you'll be using the *Circular Path Exercises* Process.
- On the Main Page, change the Initial Value of the Data Item *Number of Loops* to *100*.
- Use the *Step* button, to step forward through your Process until you reach the Page Reference Stage.
- Use the *Step Over* button and observe that the logic on *Page 1* has been processed in one step.
- Reset the Process and *Step* through your Process one Stage at a time until you are on the Decision Stage on *Page 1*.
- Press the *Step Out* button and observe that the rest of the logic on *Page 1* is processed in one go, then moves back up to the Main Page.

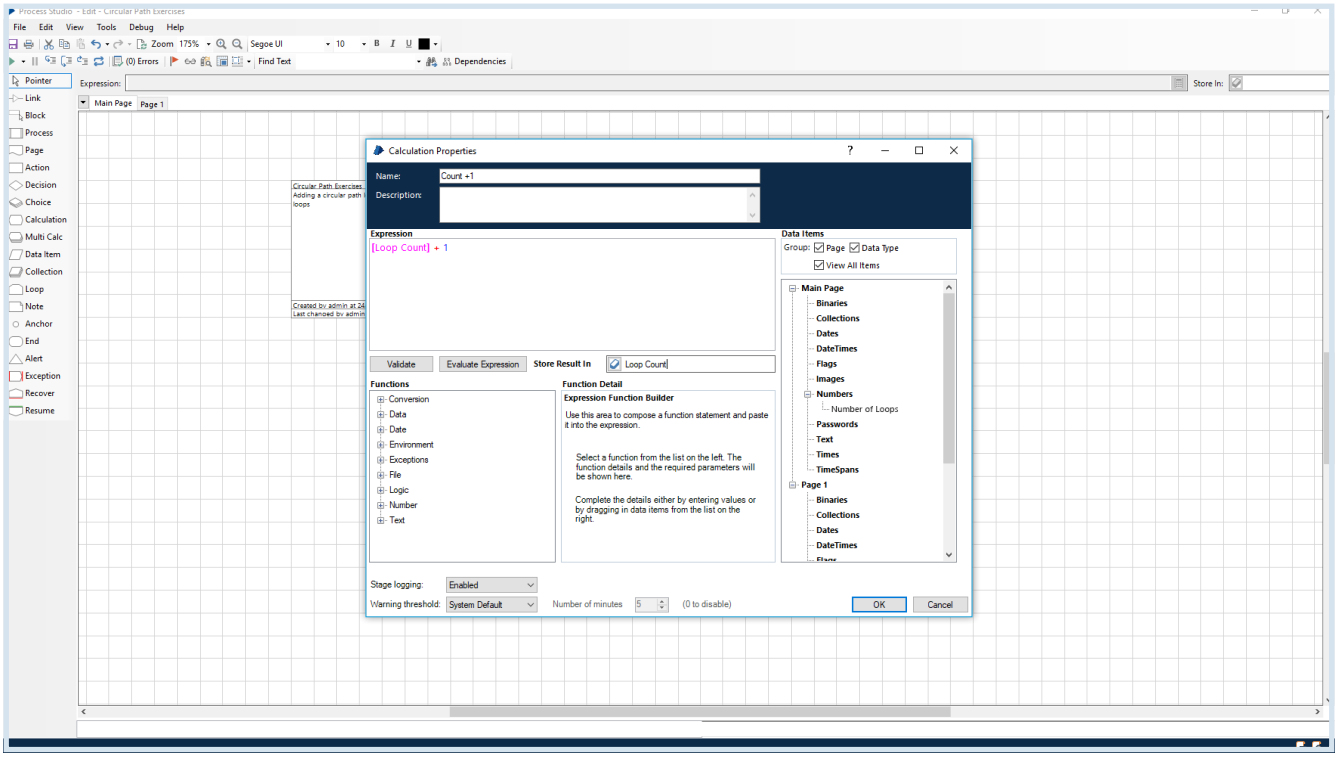


SECTION 4 ACTIVITY 3 — Video 4.3

In this activity, you will learn about Local and Global Data Items, by altering the visibility of a Data Item to make it available for use by all of the Pages within a Process.

Change the visibility of the *Number of Loops* Data Item, making it available for use by all Pages within the Process.

- For this activity, you'll be using the *Circular Path Exercises* Process.
- Go to *Page 1* and open the Calculation Stage properties window.
- In the Data Items Area, check the *Page* and *View All Items* boxes.
- Notice, that the *Number of Loops* Data Item on the Main Page is now visible, but greyed out, so cannot currently be selected. To change this, navigate to the Main Page, open the *Number of Loops* Data Item properties window and un-check *"Hide from other Pages in the Process"*.
- Return to the Calculations Stage properties on *Page 1*, to see that the *Number of Loops* Data Item on the Main Page is no longer greyed out.



SECTION 4 ACTIVITY 4a

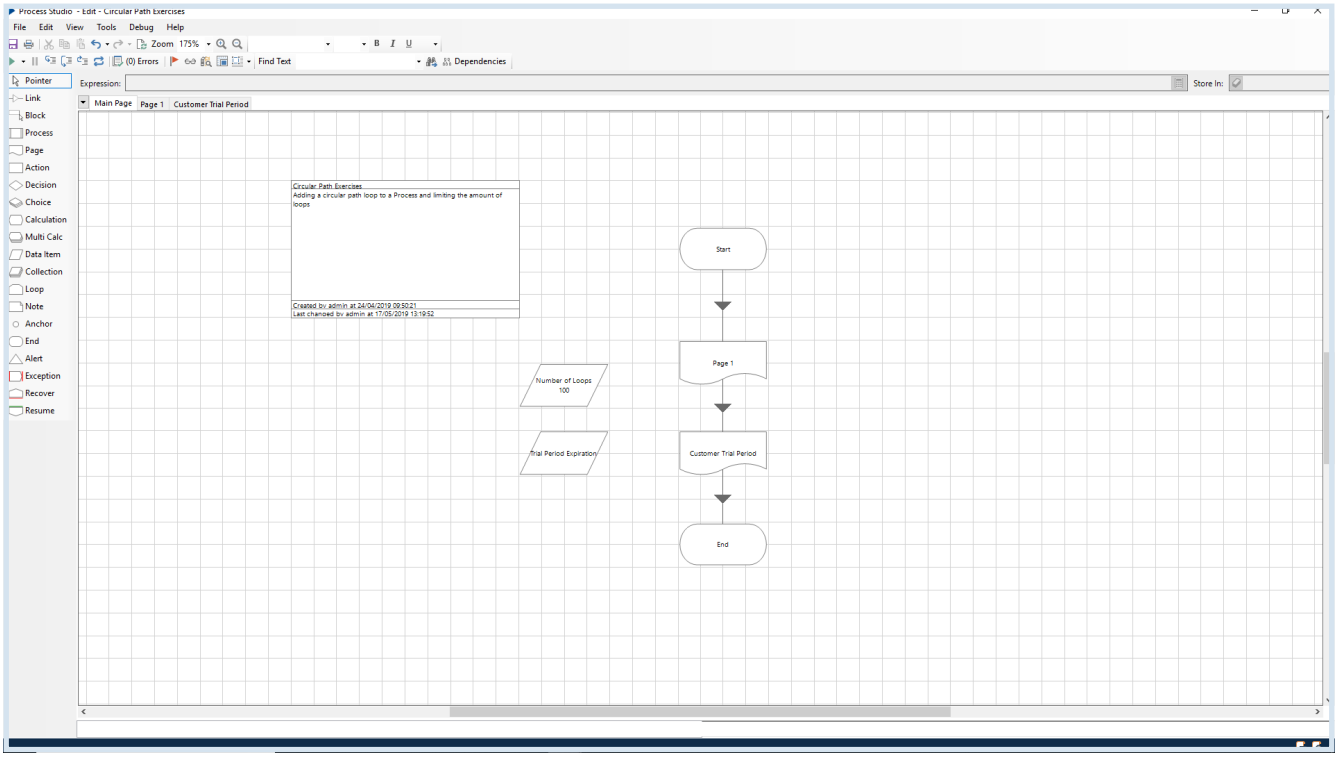
Video 4.4

In this activity, you will create a new Page that can calculate a date 30 days from today. This will be used to determine the expiration date of a trial period for an application, after which the user would need to subscribe.

You will then configure Input and Output Parameters, so that the Main Page of your Process can transmit values to, and receive values from, your new Page.

Create a new Page that can calculate a date 30 days from today.

- For this activity, you'll be using the *Circular Path Exercises* Process.
- On the Main Page, add a Page Reference Stage to your Process Diagram - select *Add a new page and create a reference to it*. Name your new Page *Customer Trial Period*. Link the Stages together.
- On the Main Page, add a Data Item named *Trial Period Expiration* with a *Date* Data Type.
- In the *Customer Trial Period* Page add two Data Items to your Process Diagram - *Trial Duration* with a *Number* Data Type and *Expiration Date* with a *Date* Data Type.

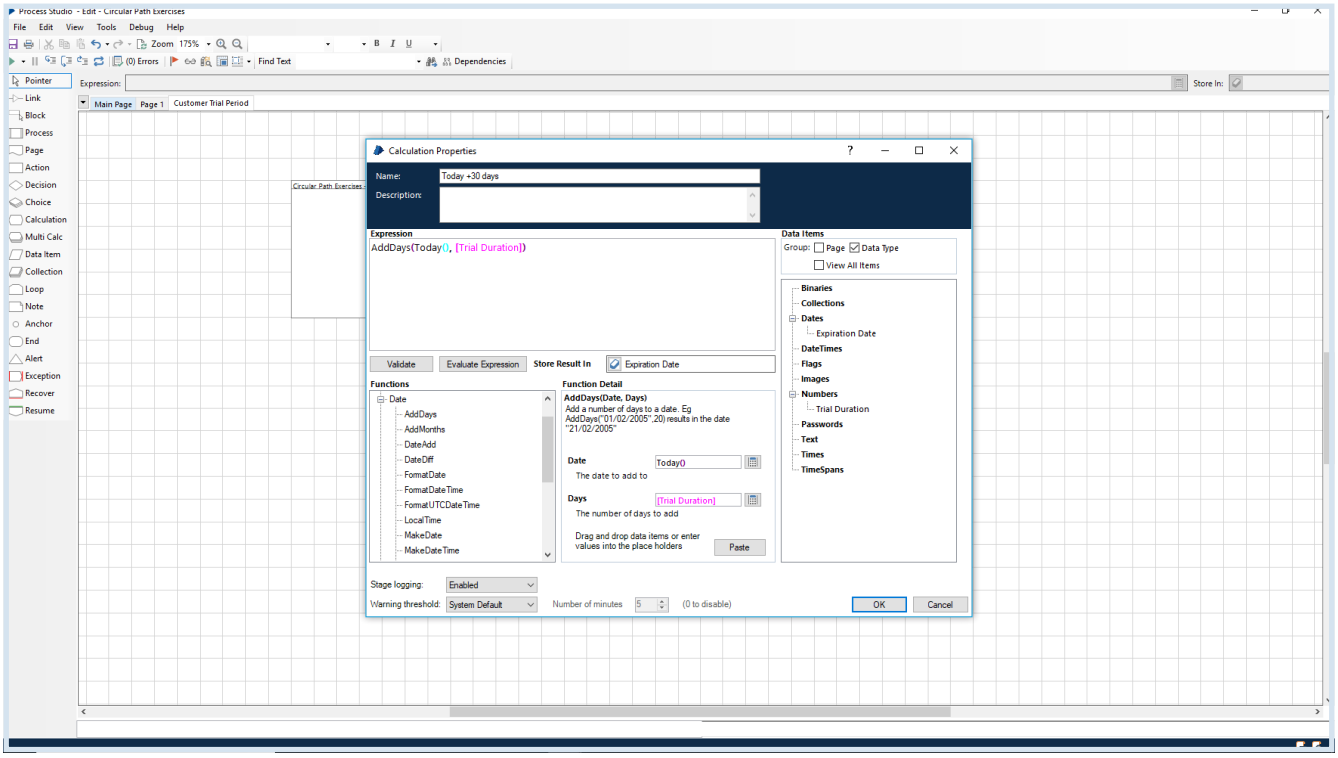


SECTION 4 ACTIVITY 4b

Video 4.4

Create the Expression that will calculate a date 30 days from today.

- Add a Calculation Stage to the *Customer Trial Period* Page that uses *Expiration Date* for the *Store Result In*.
- Create an Expression in the Calculation Stage, which will calculate a date 30 days from today. In the Functions Area, open the *Date* functions and select *AddDays*.
- Drag the *Trial Duration* Data Item into the *Days* field.
- In the *Date* field, type the Expression - *Today()*.
- Click *Paste* to populate the Expression Area with your completed Expression.
- Link the Stages together.



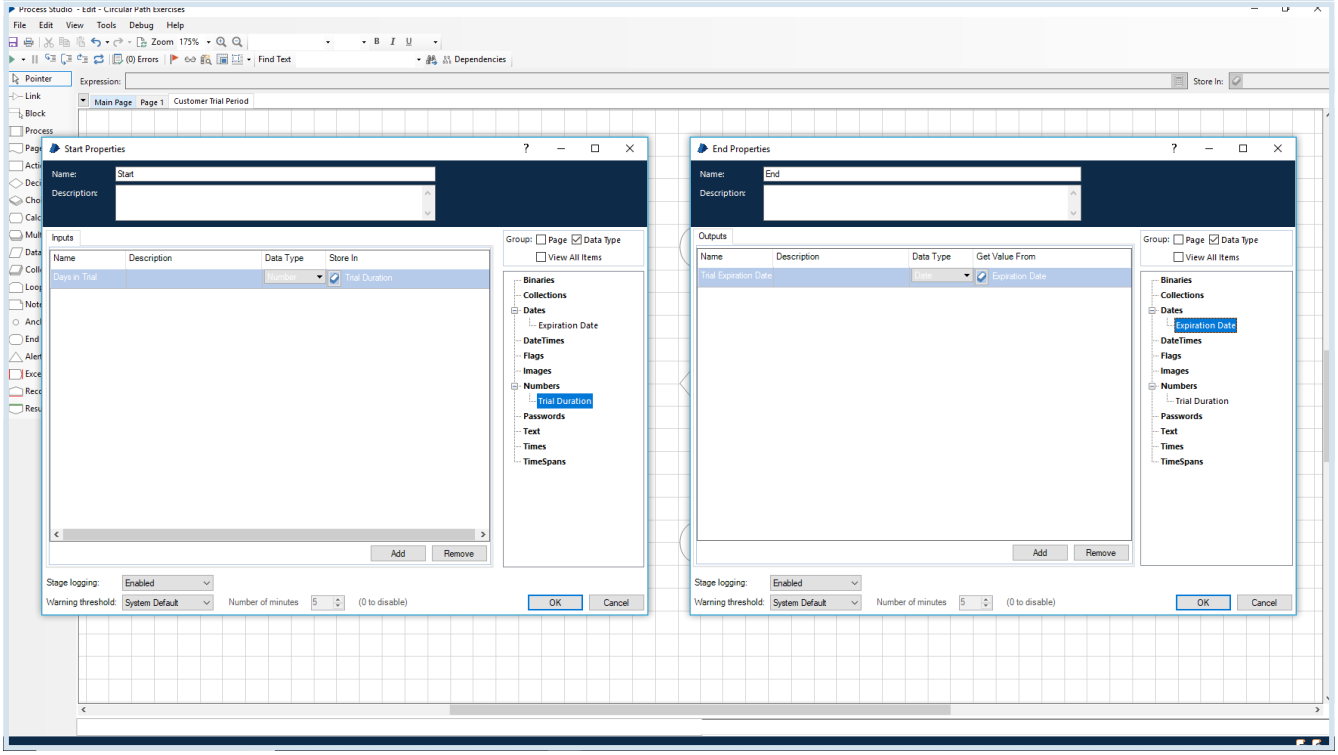
SECTION 4 ACTIVITY 4c

Video 4.4

Create the Output Parameter, that will transmit the value of the *Expiration Date* from the End Stage of the new Page, up to the Page Reference Stage on the Main Page.

- Open the Start Stage properties on the *Customer Trial Period* Page and add an Input *Days in Trial*, using *Trial Duration* to *Store In*.
- Open the End Stage properties of the *Customer Trial Period* Page and add an Output *Trial Expiration Date* using *Expiration Date* in *Get Value From*.
- On the Main Page, open the Page Reference Stage properties for the *Customer Trial Period* Page, and select the *Inputs* tab.
- Enter *30* for the *Days in Trial* value column.
- Click on the *Outputs* tab.
- *Drag* the *Trial Period Expiration* Data Item onto the *Store In* column for the *Trial Expiration Date* Output.
- Click *OK*

- *Step* through the Process using the *Step Over* button to execute each Page Reference Stage in one step.
- Notice, that *Trial Period Expiration* has been set to 30 days from today.



SECTION 4 ACTIVITY 5a

Video 4.5

In this activity, you will receive an introduction to the Control Room interface.

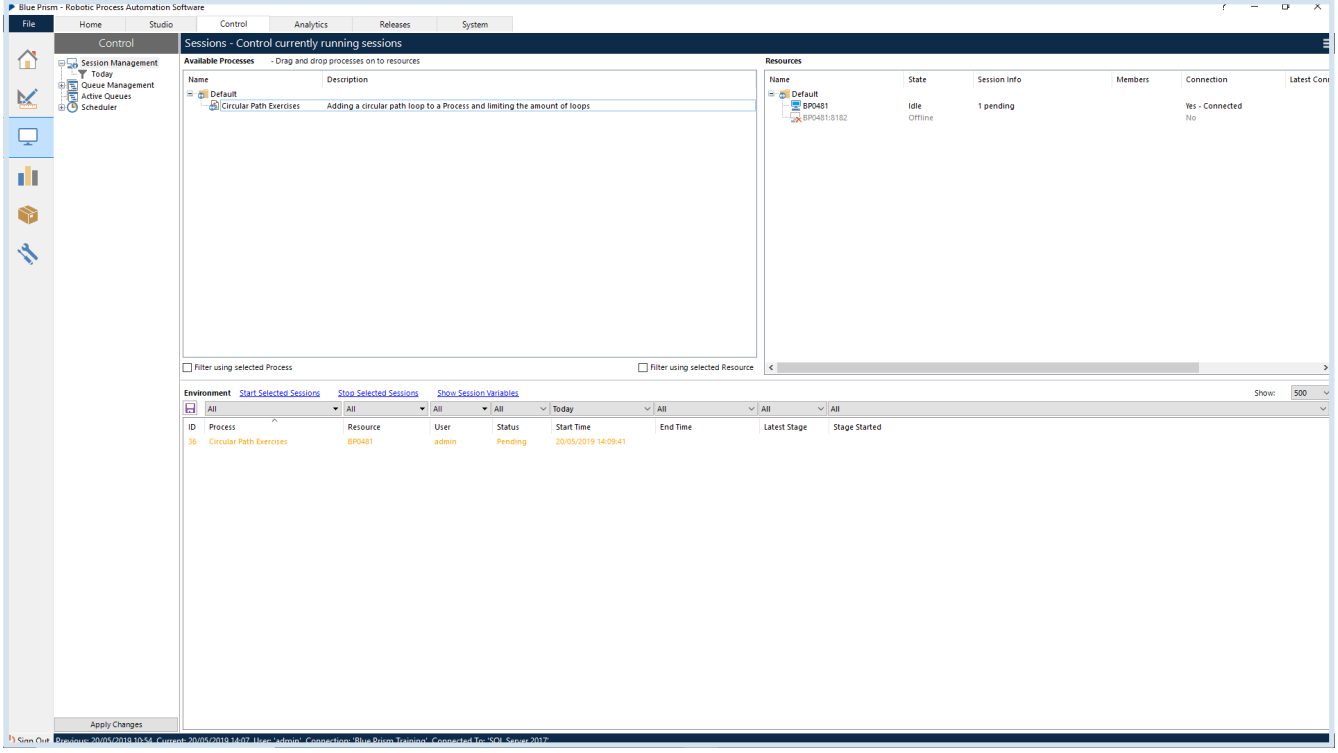
You will then learn how to publish a Process to make it available in Control Room, how to run a Session of a Process in Control Room – with and without Startup Parameters - and how to stop a Session in Control Room.

You will also learn how to identify a Session that has encountered an error or a Session Exception and how to locate and fix errors, by accessing the Session Logs.

Open the Process and Publish it to Control Room.

- Open the *Circular Paths Exercises* Process.
- Open the properties window of the Information Stage on the Main Page.
- Check the *Publish This Process to Control Room* checkbox.
- Save the Process and navigate to Control Room.

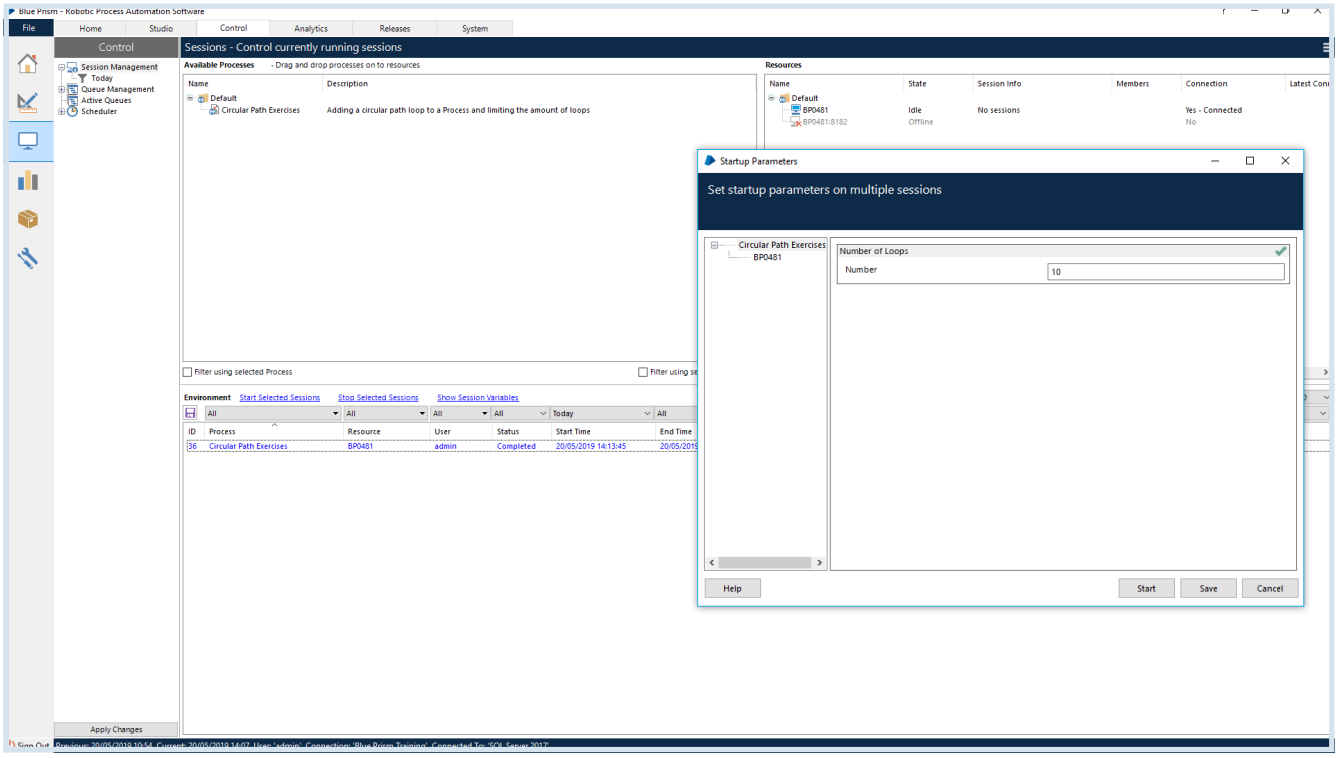
- Click *Refresh* to see the *Circular Path Exercises* Process in the Available Processes Area.



SECTION 4 ACTIVITY 5b — Video 4.5

Assign your Process to a Digital Worker.

- *Drag* the Process from the Available Processes Area onto the blue computer icon in the Resources Area. This will create a Session, which will be visible in the Environment Area.
- Run the Session, by selecting it and then clicking *Start Selected Sessions*.
- Because you set up a Startup Parameter in a section 4.1, you will now encounter the Startup Parameters window - enter the value *10* to supply to the *Number of Loops* Data Item on the Main Page of the Process.
- Notice, the status change as the Process runs. Once complete, the Session will turn blue.

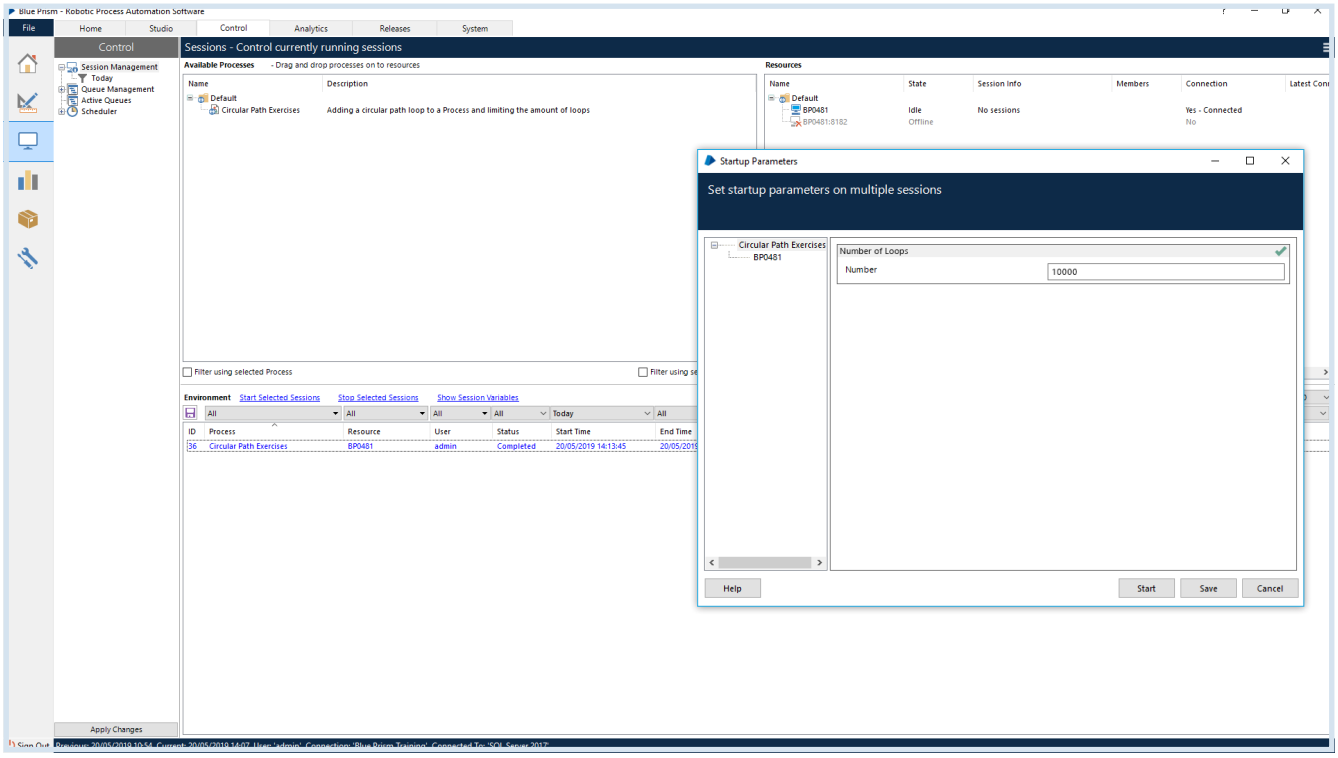


SECTION 4 ACTIVITY 5c

Video 4.5

Stop a running Session.

- Create another Session by repeating the steps above, but this time enter *10000* for the Startup Parameter.
- As the Session is running, select it and click *Stop Selected Sessions*.
- This action will be visible in the Session Status column in the Environment Area of Control Room.

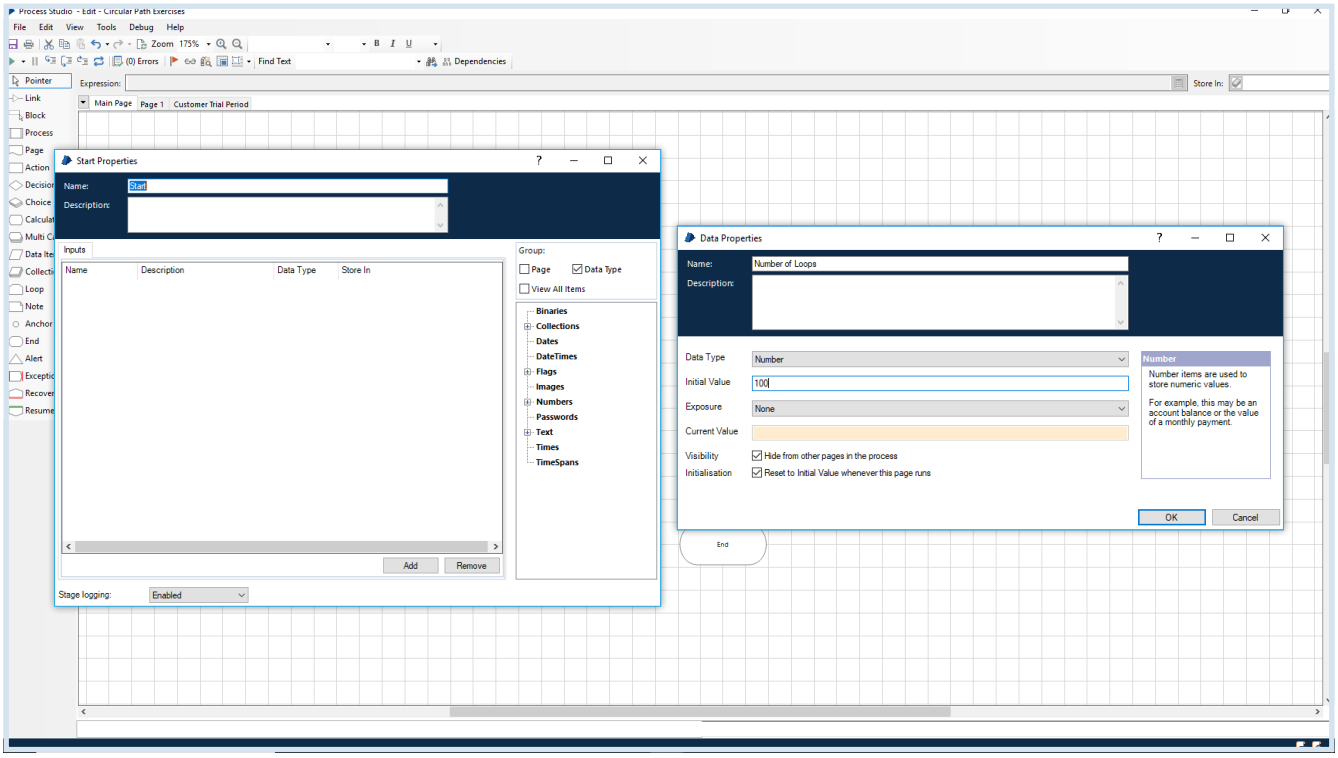


SECTION 4 ACTIVITY 5d

Video 4.5

Remove the Startup Parameter so the Process runs in Control Room without the external input.

- Open the *Circular Paths Exercises* Process.
- On the Main Page, open the Start Stage and remove the Startup Parameter.
- Check that the *Number of Loops* Data Item on the Main Page still has an Initial Value of *100*.
- Save the changes to the Process.

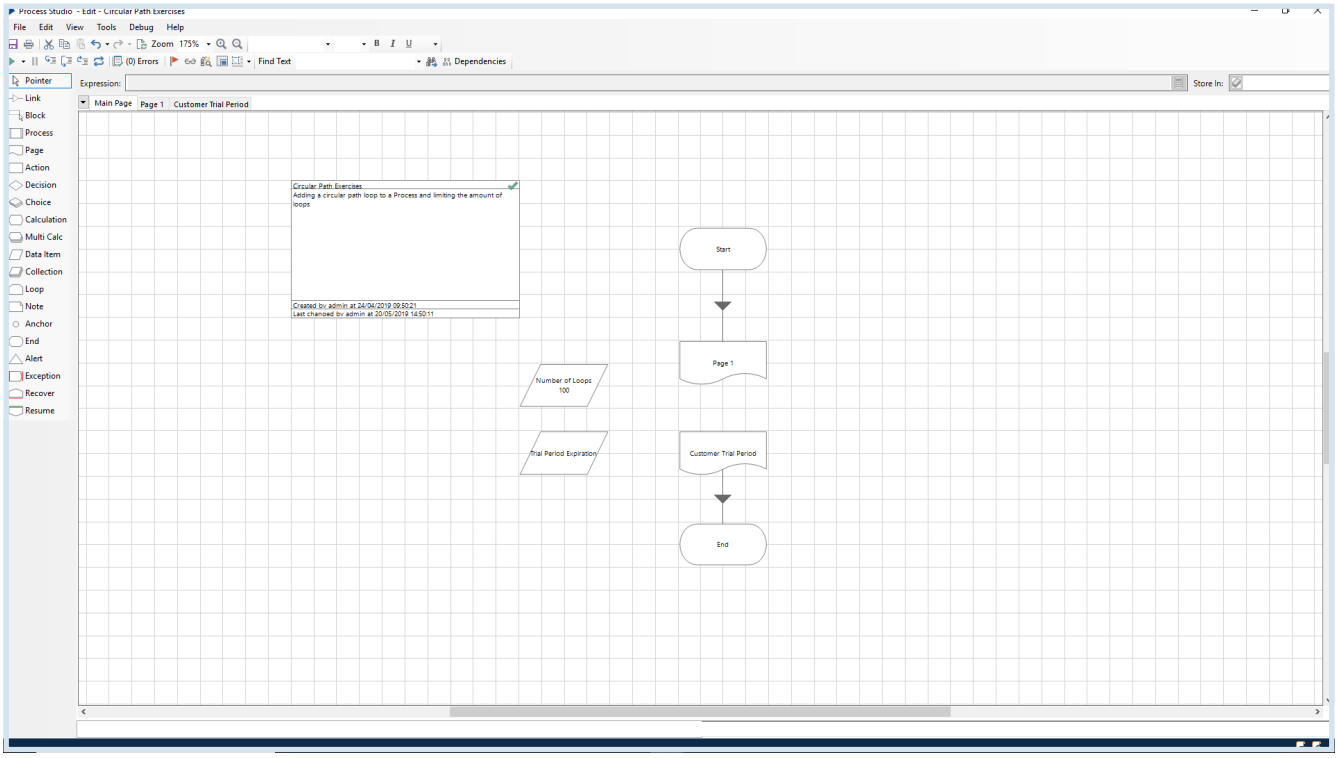


SECTION 4 ACTIVITY 5e

Video 4.5

Induce an error in the Process to learn how to identify errors.

- Induce an error in your Process by removing a link from the Process Diagram and saving it.
- Run a new Session in Control Room.
- The Session status should now read *Terminated*.
- *Right-click* on the *Terminated* Session and select *View Log*.
- Notice, that details of each Stage in the Process are recorded and that the error has been logged with the Stage Name, Stage Type and a description of the error that occurred.
- Reinstate the link you removed, to correct the error you induced earlier.



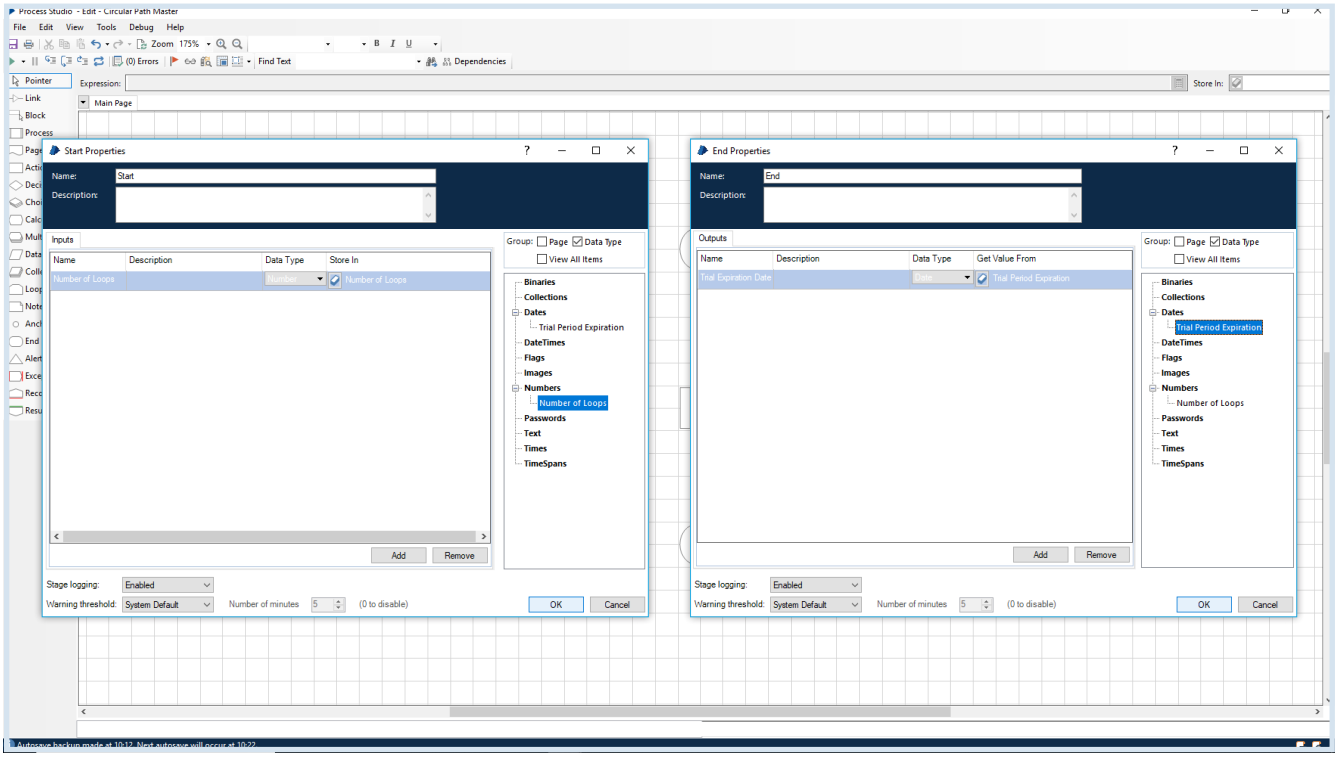
SECTION 4 ACTIVITY 6a

Video 4.6

In this activity, you'll add an Output to a Process, so that it can be used as a Sub-Process. You will also create a Master Process that uses a Process Reference Stage to interact with a Sub-Process.

Set up an Output Parameter, so that the *Circular Path Exercises* Process can be used as a Sub-Process.

- For this activity, you'll be using the *Circular Path Exercises* Process.
- Open the End Stage properties, on the Main Page.
- Create a new Output Parameter called *Trial Expiration Date* using the value from the *Trial Period Expiration* Data Item.
- Amend the Start Stage and *Number of Loops* Data Item, to reinstate the Startup Parameter that you set up in Section 4.1.
- Save and close the Process.

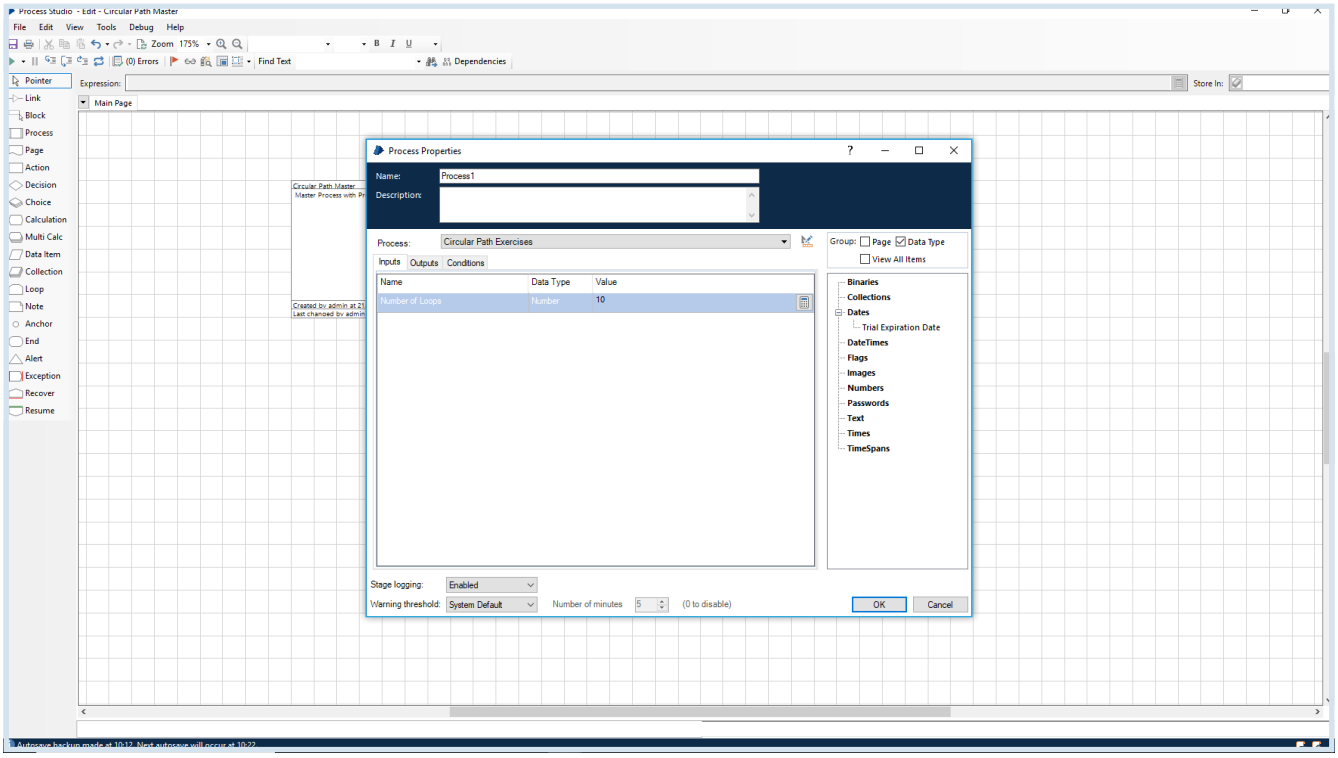


SECTION 4 ACTIVITY 6b

Video 4.6

Create a Master Process that uses a Process Reference Stage to interact with the Sub Process.

- Create a new Process *Circular Path Master* and add a Process Reference Stage and a *Date* Data Item to your Process Diagram and link them together.
- Within the Process Reference Stage properties, choose *Circular Path Exercises* as the Sub-Process.
- Enter a value of *10* for the *Number of Loops* Input.
- Use a *Date* Data Item to store the Output from *Trial Expiration Date*.
- On running the Process, notice that the *Circular Path Exercises* Process is run in one step.
- If you do wish to step through every Stage - including those in the *Circular Path Exercises* Process - then you can use the *Step* button.


Process Studio - Edit - Circular Path Master
File Edit View Tools Debug Help
Process Properties
Name: Process1
Description:
Process: Circular Path Exercises
Inputs Outputs Conditions
Name Data Type Value
Number of Loops Number 10
Binaries
Collections
Dates
Trial Expiration Date
DateTimes
Flags
Images
Numbers
Passwords
Text
Times
TimeSpans
Stage logging: Enabled
Warning threshold: System Default
Number of minutes
(0 to disable)
OK
Cancel